

Figure 3 has been produced by using the following methodology. The search has been completed in PubMed.

**1) Filter used to search Hospitals:**

("hospita\*"[All Fields] AND "Ab GENE"[All Fields] AND (("anti bacterial agents"[Pharmacological Action] OR "anti bacterial agents"[MeSH Terms] OR ("anti bacterial"[All Fields] AND "agents"[All Fields]) OR "anti bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic s"[All Fields] OR "antibiotical"[All Fields]) AND "resistanc\*"[All Fields])) AND ((ffrft[Filter]) AND (fft[Filter]) AND (1990:3000/12/12[pdat]))

antibiotic: "anti-bacterial agents"[Pharmacological Action] OR "anti-bacterial agents"[MeSH Terms] OR ("anti-bacterial"[All Fields] AND "agents"[All Fields]) OR "anti-bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic's"[All Fields] OR "antibiotical"[All Fields]

**2) Filter used to search Pets or in alternative “companion anima\*”**

("pet"[All Fields] AND "Ab GENE"[All Fields] AND (("anti bacterial agents"[Pharmacological Action] OR "anti bacterial agents"[MeSH Terms] OR ("anti bacterial"[All Fields] AND "agents"[All Fields]) OR "anti bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic s"[All Fields] OR "antibiotical"[All Fields]) AND "resistanc\*"[All Fields])) AND ((ffrft[Filter]) AND (fft[Filter]) AND (1990:3000/12/12[pdat]))

antibiotic: "anti-bacterial agents"[Pharmacological Action] OR "anti-bacterial agents"[MeSH Terms] OR ("anti-bacterial"[All Fields] AND "agents"[All Fields]) OR "anti-bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic's"[All Fields] OR "antibiotical"[All Fields]

Note plasmid pET was excluded.

**3) Filter used to search recreational and park**

(("recreational"[All Fields] OR "park\*"[All Fields]) AND (("anti bacterial agents"[Pharmacological Action] OR "anti bacterial agents"[MeSH Terms] OR ("anti bacterial"[All Fields] AND "agents"[All Fields]) OR "anti bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic s"[All Fields] OR "antibiotical"[All Fields]) AND "resistanc\*"[All Fields]) AND "tetM"[All Fields]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (1990:3000/12/12[pdat])))

antibiotic: "anti-bacterial agents"[Pharmacological Action] OR "anti-bacterial agents"[MeSH Terms] OR ("anti-bacterial"[All Fields] AND "agents"[All Fields]) OR "anti-bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic's"[All Fields] OR "antibiotical"[All Fields]

#### **4) Filter used to search sewage**

("sewage"[All Fields] AND ((anti bacterial agents"[Pharmacological Action] OR "anti bacterial agents"[MeSH Terms] OR ("anti bacterial"[All Fields] AND "agents"[All Fields]) OR "anti bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic s"[All Fields] OR "antibiotical"[All Fields]) AND "resistanc\*"[All Fields]) AND "tetA"[All Fields]) AND ((ffrft[Filter]) AND (fft[Filter]) AND (1990:3000/12/12[pdat]))

antibiotic: "anti-bacterial agents"[Pharmacological Action] OR "anti-bacterial agents"[MeSH Terms] OR ("anti-bacterial"[All Fields] AND "agents"[All Fields]) OR "anti-bacterial agents"[All Fields] OR "antibiotic"[All Fields] OR "antibiotics"[All Fields] OR "antibiotic's"[All Fields] OR "antibiotical"[All Fields]